SOLVAY MINERALS

February 11, 1997

David Gaige
Woodward-Clyde
4582 South Ulster St.
Denver, CO 80231

Dear David:

Enclosed you will find the additional information you need to complete the dispersion modeling. The information includes:

1) Upwind and downwind PM_{10} data for 1994, 1995, and 1996, including the daily maximum, second highest daily, and annual average for each year.
2) Mine vent and package boiler data.
3) Plot plan with mine vent and boiler locations.
4) Acid lake coordinates.

We should have ESP information for the BACT analysis within a few days. If you need further information don't hesitate to call me at (307) 872-6571.

Sincerely,

Dolly A. Potter

Dolly A. Potter
Environmental Engineer

Enclosure

cc. Jeff Yuhas

Solvay Minerals, Inc.
P.O. Box 1167, Green River, Wyoming 82935 307/875-6500 Fax: 307/872-6510

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SOLVAY MINERALS, INC.
AMBIENT AIR MONITORING
1994

DATE		SITE #1-PM10 UPWIND	HIGHEST TO LOWEST	UPWIND AVERAGE	SITE #2-PM10 DOWNWIND	HIGHEST TO LOWEST	DOWNWIND AVERAGE
2-Jan		2	41	11.25	5	74	15.26
8-Jan		4	34		3	38	
14-Jan		3	27		9	30	
20-Jan		6	22		7	28	
26-Jan		11	20		11	27	
1-Feb		3	20		6	25	
7-Feb		6	19		7	24	
13-Feb		27	18		25	24	
19-Feb		7	17		7	24	
25-Feb		4	17		9	23	
3-Mar		11	17		12	23	
9-Mar		10	16		14	21	
15-Mar		8	16		13	19	
21-Mar		8	15		15	19	
27-Mar		7	15		8	18	
2-Apr		11	15		18	18	
8-Apr		4	15		6	18	
14-Apr		22	14		27	18	
20-Apr		20	13		23	16	
26-Apr		7	13		8	16	
2-May		13	13		15	15	
8-May		14	12		16	15	
14-May		15	12		18	15	
20-May		9	12		13	15	
26-May		15	11		16	14	
1-Jun		9	11		11	14	
7-Jun		11	11		18	14	
13-Jun		20	11		38	14	
19-Jun		10	11		11	13	
25-Jun		16	11		24	13	
1-Jul		18	10		30	13	
7-Jul		5	10		8	13	
13-Jul		12	10		19	12	
19-Jul		15	9		23	12	
25-Jul		17	9		21	12	
31-Jul		12	8		14	11	
6-Aug		17	8		24	11	
12-Aug		13	8		14	11	
18-Aug		41	8		24	11	
24-Aug		17	8		19	9	
30-Aug		16	7		18	9	
5-Sep		19	7		28	9	
11-Sep		15	7		13	9	
17-Sep		13	6		15	8	
23-Sep		11	6		15	8	
29-Sep		12	6		EM	8	
5-Oct		6	6		7	8	
11-Oct		8	6		14	7	
17-Oct		3	5		5	7	
23-Oct		6	5		12	7	
29-Oct		8	5		11	7	
4-Nov		5	4		7	7	
10-Nov		10	4		12	6	
16-Nov		8	4		9	6	
22-Nov		6	4		8	6	
28-Nov		4	4		9	5	
4-Dec		5	3		6	5	
10-Dec		2	3		EM	3	
16-Dec		4	3		EM		
22-Dec		34	2		74		
28-Dec		11	2		13		
	AVERAGE	11.25		AVERAGE	15.26		

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SOLVAY MINERALS, INC.
AMBIENT AIR MONITORING
1995

DATE		SITE #1-PM10 UPWIND	HIGHEST TO LOWEST	UPWIND AVERAGE	SITE #2-PM10 DOWNWIND	HIGHEST TO LOWEST	DOWNWIND AVERAGE
3-Jan		24	57	9.72	27	87	18.53
9-Jan		5	24		7	63	
15-Jan		4	22		7	46	
21-Jan		16	18		17	44	
27-Jan		3	18		12	39	
2-Feb		5	17		8	35	
8-Feb		11	17		13	34	
14-Feb		11	16		PO	33	
20-Feb		5	14		PO	32	
26-Feb		9	14		14	32	
4-Mar		4	13		8	29	
10-Mar		13	13		12	28	
16-Mar		4	12		4	27	
22-Mar		4	12		8	23	
28-Mar		8	12		7	22	
3-Apr		7	12		18	22	
9-Apr		4	11		4	22	
15-Apr		18	11		19	21	
21-Apr		9	11		8	19	
27-Apr		8	11		8	18	
3-May		2	11		7	17	
9-May		8	11		9	17	
15-May		11	10		16	16	
21-May		10	10		12	16	
27-May		8	9		8	16	
2-Jun		12	9		13	16	
8-Jun		8	9		6	16	
14-Jun		17	8		16	15	
20-Jun		6	8		34	14	
26-Jun		13	8		29	13	
2-Jul		9	8		39	13	
8-Jul		22	8		35	13	
14-Jul		14	8		44	12	
20-Jul		10	8		16	12	
26-Jul		12	8		46	12	
1-Aug		17	7		63	12	
7-Aug		14	7		32	11	
13-Aug		57	7		10	10	
19-Aug		7	7		87	9	
25-Aug		8	6		FF	9	
31-Aug		18	6		28	9	
6-Sep		11	6		33	9	
12-Sep		12	6		32	8	
18-Sep		7	5		16	8	
24-Sep		12	5		12	8	
30-Sep		7	5		17	8	
6-Oct		6	5		22	8	
12-Oct		11	5		22	8	
18-Oct		8	5		23	8	
24-Oct		5	5		8	8	
30-Oct		5	4		13	7	
5-Nov		8	4		15	7	
11-Nov		2	4		8	7	
17-Nov		6	4		11	7	
23-Nov		5	4		16	6	
29-Nov		3	4		21	6	
5-Dec		4	4		9	4	
11-Dec		4	3		9	4	
17-Dec		5	3		6		
23-Dec		11	2		22		
29-Dec		6	2		9		
	AVERAGE	9.72		AVERAGE	18.53		

[redacted]

			SOLVAY MINERALS, INC.				
			AMBIENT AIR MONITORING				
				1996			
		SITE #1-PM10	HIGHEST	UPWIND	SITE #2-PM10	HIGHEST	DOWNWIND
DATE		UPWIND	TO LOWEST	AVERAGE	DOWNWIND	TO LOWEST	AVERAGE
4-Jan		2	27	10.02	9	34	13.88
10-Jan		4	26		8	27	
16-Jan		5	22		10	26	
22-Jan		5	21		13	25	
28-Jan		3	20		10	24	
3-Feb		6	19		9	24	
9-Feb		4	18		6	23	
15-Feb		5	17		7	23	
21-Feb		14	16		14	22	
27-Feb		4	16		7	20	
4-Mar		4	15		7	18	
10-Mar		7	15		12	18	
16-Mar		5	14		7	18	
22-Mar		9	14		12	17	
28-Mar		10	14		11	17	
3-Apr		4	14		7	17	
9-Apr		17	14		17	16	
15-Apr		6	14		8	16	
21-Apr		4	14		11	16	
27-Apr		14	13		18	15	
3-May		13	13		27	15	
9-May		9	12		10	15	
15-May		13	12		23	14	
21-May		14	12		16	14	
27-May		5	11		9	14	
2-Jun		11	11		14	14	
8-Jun		19	10		24	14	
14-Jun		15	10		20	13	
20-Jun		22	9		26	12	
26-Jun		16	9		17	12	
2-Jul		18	9		24	12	
8-Jul		15	9		15	12	
14-Jul		14	7		12	11	
20-Jul		11	6		16	11	
26-Jul		16	6		18	11	
1-Aug		14	6		15	10	
7-Aug		12	6		12	10	
13-Aug		26	5		EM	10	
19-Aug		21	5		22	9	
25-Aug		20	5		23	9	
31-Aug		27	5		34	9	
6-Sep		14	5		18	9	
12-Sep		10	5		PO.	9	
18-Sep		5	5		11	8	
24-Sep		4	5		14	8	
30-Sep		9	4		PO	8	
6-Oct		12	4		16	8	
12-Oct		14	4		25	7	
18-Oct		12	4		15	7	
24-Oct		5	4		14	7	
30-Oct		9	4		EM	7	
5-Nov		4	4		9	7	
11-Nov		3	4		14	7	
17-Nov		4	4		8	6	
23-Nov		3	3		7	6	
29-Nov		6	3		6	6	
5-Dec		3	3		8		
11-Dec			3		6		
17-Dec		5	2		9		
23-Dec		6			17		
29-Dec							
	AVERAGE	10.02		AVERAGE	13.88		

[redacted]

Solvay Minerals

Additional Dispersion Modeling Data

Mine Vent

Shaft Location - N 305301.57
E 222812.32
Total Air Flow - 1,500,000 cfm
Split for each fan
- 750,000 cfm
Velocity - 3000 fpm
Inside Dia. of Cone - 15 ft
Air Temp - 70-75 F (ambient)
Elevation - 2558.5 ft
Breeze-less (one vent)
- 250 ft at 360,000 acfm

Package Boiler Stack

(For Mine Air Heat)

Location - AQD #85
Height - 140 ft
Inside Diameter - 3 ft
Temperature - 325 F
Exhaust Velocity - 3000 fpm
Air Flow - 21,200 acfm
Firing Rate - 50 MM Btu/hr
Steam Production - 50 M scf/hr
Stack Emissions - 0.038 lb N0x / MM Btu
- 0.075 lb C0 / MM Btu
- 1.9 PPH N0x (8.32 TPY)
- 3.75 PPH C0 (16.43 TPY)

[redacted]

Solvay Minerals, Inc.
Mine Vent Emissions
Expansion Project

Estimated mine vent emissions					
Total PPH is both vents, PPH @ vent is one vent only					
	Compound	**PPH one Vent**	**Total PPH (both vents)**		
	Benzene	0.15	0.29		
	2-Butanone	0.39	0.77		
	Hexane	0.21	0.43		
	Styrene	0.04	0.08		
	Toluene	1.25	2.51		
	Xylene	4.33	8.67		
	THC	1260.79	2521.57		
	Methane	493.55	987.10		
	Ethane	26.06	52.12		
	CO	3.75	7.5		
	Total HAPs	6.37	12.75		
	VOC	741.18	1482.36		

Solvay Minerals

Wind River Range

Dispersion Model Receptor Sites

UTM Coordinates of Monitored Lakes

Name	X	Y
Black Joe Lake	650500	4733100
Deep Lake	648600	4731400
Hobbs Lake	608200	4765400
Ross Lake	609000	4805300
Saddlebag Lake	644400	4720800

DRAWING NO. 000-G-202

N 306,500 E 222,500 E 223,000 E 223,500 E 224,000 E 224,500 E 225,001 E 225,50

N 306,500

N 306,000

N 305,500

N 305,000

N 306153.02
E 223399.38

N 305960.10
E 223416.86

TRANSFER TOWER NO. 1

N 305882.05
E 223388.77

N 305890.17
E 223712.70

N 305840.22
E 223559.16

N 305820.47
E 223727.38

N 305553.81
E 223888.21

N 305483.75
E 224309.87

N 305416.06
E 224306.81

N 305617.79
E 224851.15

N 305477.36
E 224910.72

ENTRANCE

N 304753.95
E 223044.06

THIS DRAWING IS NOT VALID UNLESS THE LATEST REVISION INITIALS ARE HANDWRITTEN

REVISIONS NO	DESCRIPTION	BY	CH	APPROVED	DATE
A	ISSUED FOR PERMIT	MS			
B	ADDED ADD NO. 85 & RE-ISSUED FOR PERMIT	MS			

REVISIONS NO	DESCRIPTION	BY	CH	APPROVED	DATE

REFERENCES

00-G-201	SURFACE FACILITY PLOT PLAN	
00-G-202	SURFACE FACILITY PLOT PLAN	
CONTOUR	SURFACE CONTOUR PLOT PLAN	
100-B-201	SITE DEVELOPMENT PLAN	

DESIGNED	MGS	12/9/96
DRAWN	MGS	
CHECKED		
APPROVED 1		
APPROVED 2		
CLIENT APP'L		

DATE TO: A B C D E F | 0 1 2 3 4 5 6 7
CLIENT
FIELD
MICRO

CLIENT
SOLVAY MINERALS
GREEN RIVER, WY.

Kvaerner Davy
San Francisco, California

TITLE
EMISSION POINTS PLOT PLAN

SCALE 1"=100'-0" | PROJ. NO. 299000 | REVISION
DRAWING NO.
000-G-202
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0000202.990 CAD077 12/09/96

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